



Initial Analysis For An 8-Hour Ozone Boundary Option For the Maricopa County Nonattainment Area

June 17, 2003





8-Hour Ozone Boundary

- **States must recommend nonattainment area boundaries - July 15, 2003**
 - **EPA finalizes boundaries - April 15, 2004**
 - **Boundary must include all areas that do not meet or contribute to a nearby area that does not meet the standards**
 - Protect public health
 - More stringent requirements for business, industry, and transportation
 - Transportation conformity requirements apply
 - Difficult to make the boundary smaller once it is set
 - Boundary can be made larger at any time
- Clean Air Act, Section 107(d)(3)(D)

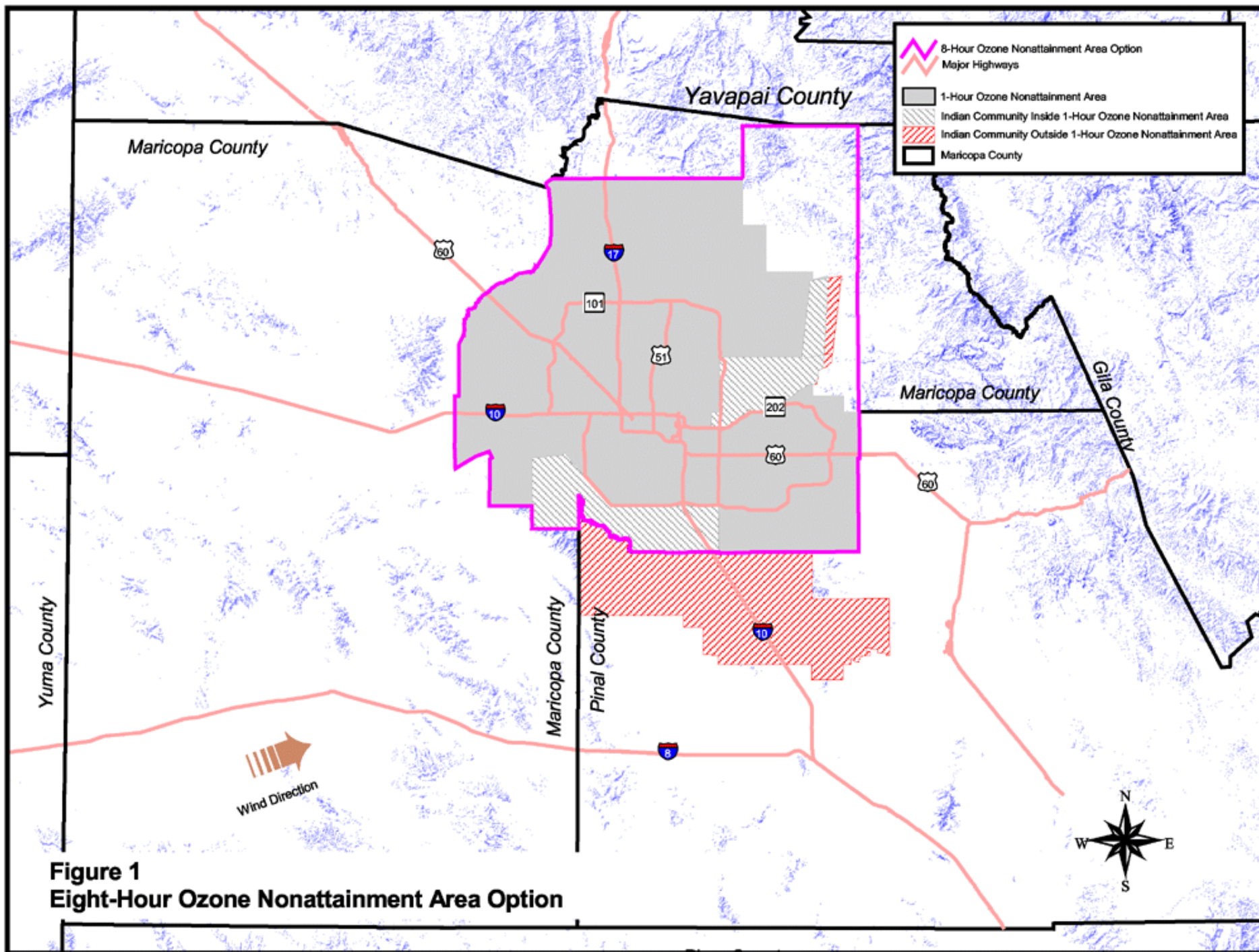


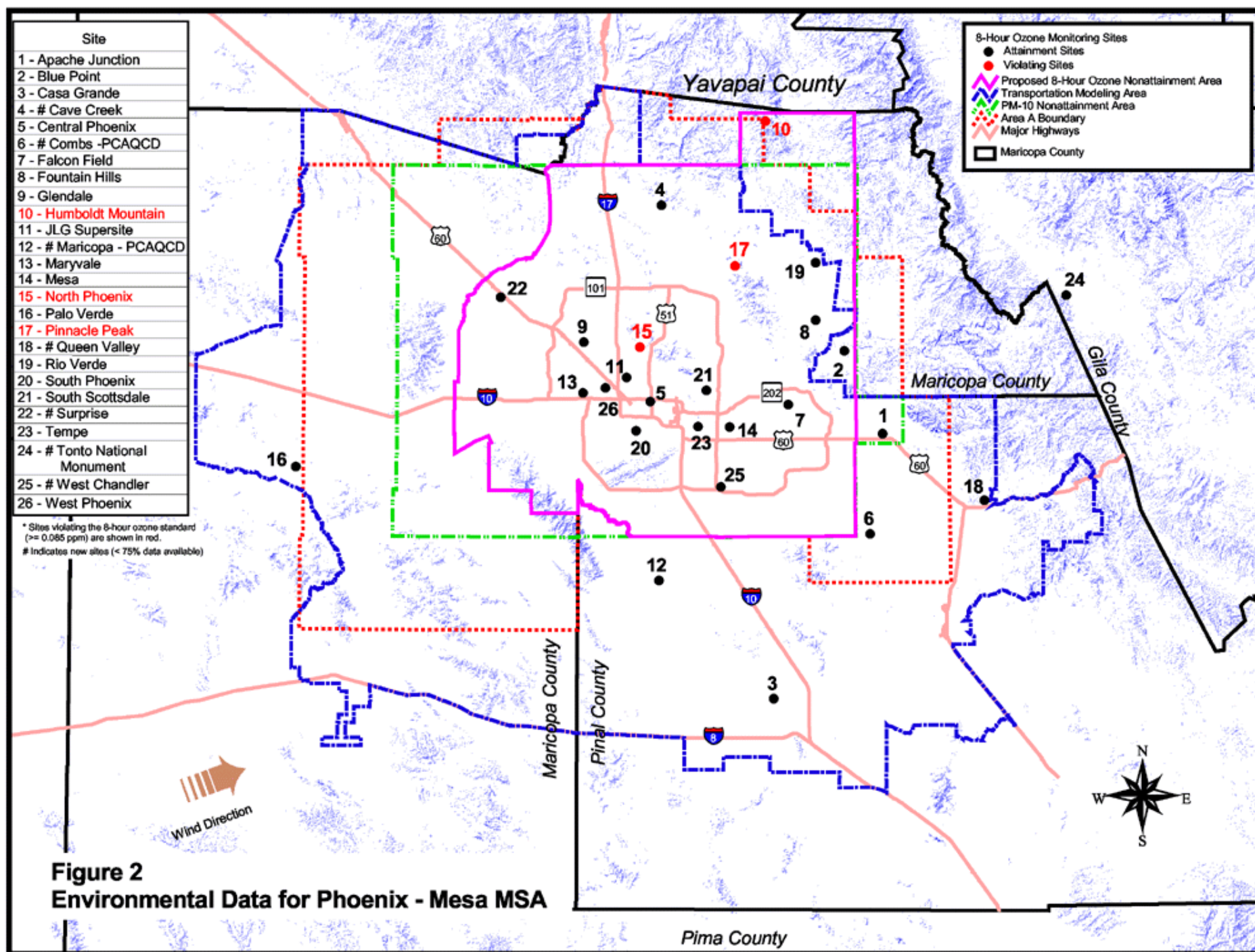


8-Hour Ozone Boundary

- EPA boundary presumption is the MSA (Maricopa and Pinal Counties)
- States may propose a smaller boundary by addressing 11 key factors
- MAG conducted an initial analysis using EPA factors
 - Data analyzed through 2020
 - Compared the MSA with the current 1-hour ozone boundary
- Boundary Option: Expand the current 1-hour ozone boundary to include the Humboldt Mountain monitor to the NE and the Blue Point monitor to the East









8-Hour Ozone Comparison for Sites Violating the New Standard in 2000, 2001, or 2002

Monitoring Site	1998 through 2000 Average 4 th Highest Reading (ppm)	1999 through 2001 Average 4 th Highest Reading (ppm)	2000 through 2002 Average 4 th Highest Reading (ppm)
Blue Point	.088	.085	.084
Fountain Hills	.085	.085	.084
Humboldt Mountain	.087	.085	.085
Mount Ord	.089	.085	N/A
North Phoenix	.086	.085	.085
Pinnacle Peak	.085	.085	.085
West Phoenix	.086	.082	.080





Rationale for the 8-Hour Ozone Boundary Option

- In 2000-2002, violations occurred in the centralized urban area of the MSA and in downwind areas of Northeastern Maricopa County
 - In the N.E., violations are due to transport from urbanized areas and biogenics in rural locations
 - 3 monitors with violations: Humboldt Mountain, North Phoenix, and Pinnacle Peak

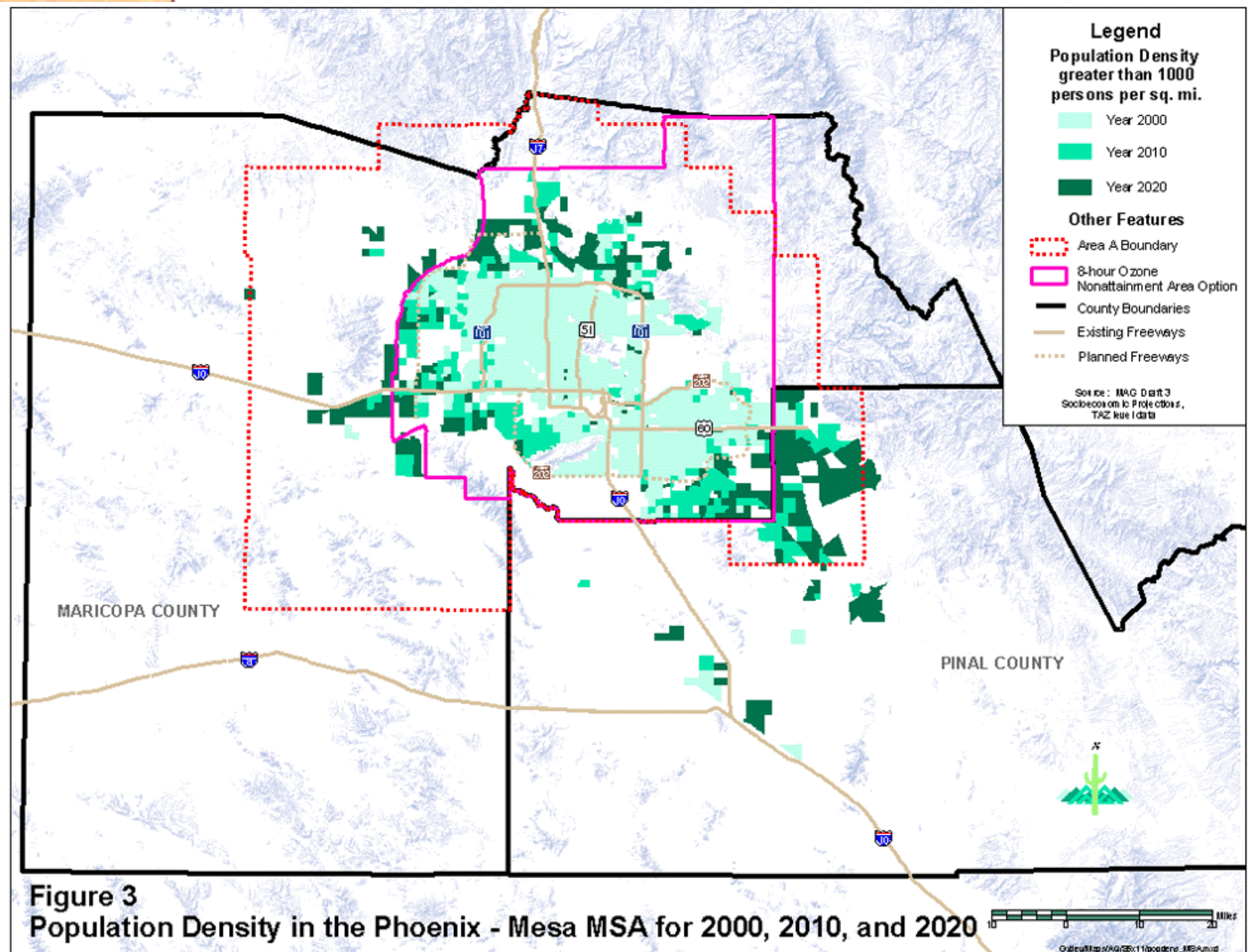




Population Estimates

	<u>MSA</u>	<u>Boundary Option</u>	<u>%</u>
2000	3,278,100	3,050,000	93.0%
2010	4,581,000	4,024,000	87.8%
2020	6,077,000	4,870,000	80.1%



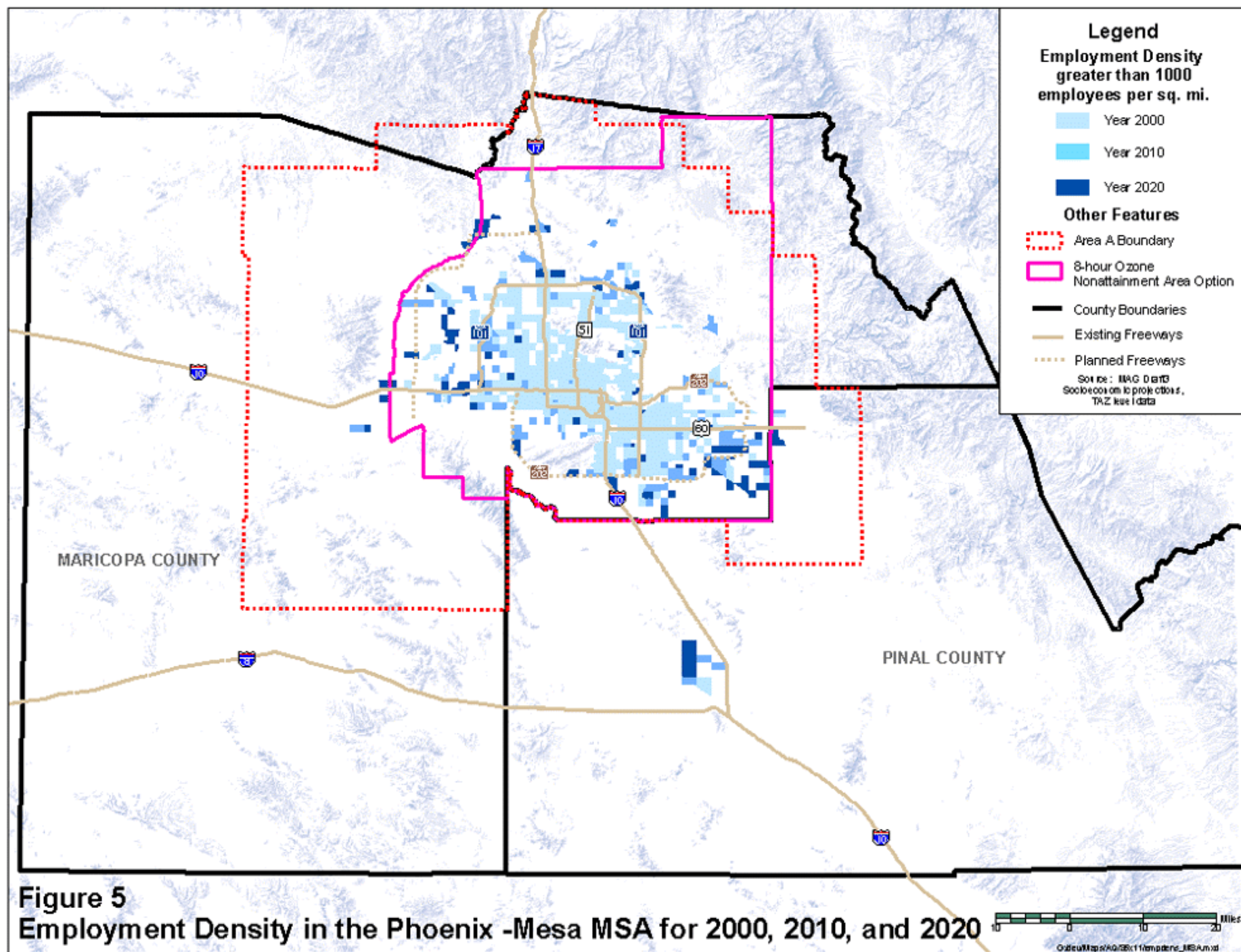


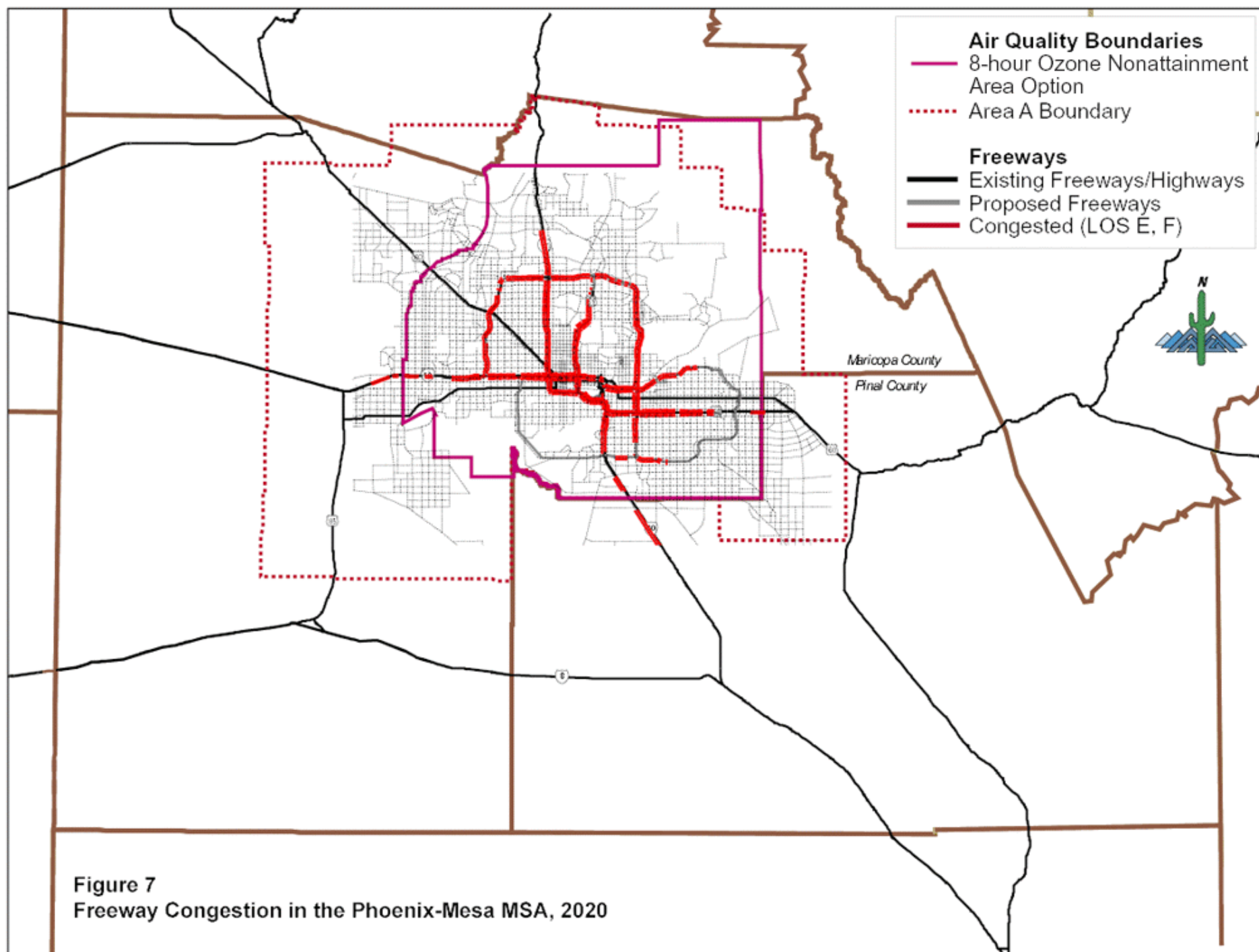


Employment Estimates

	<u>MSA</u>	<u>Boundary Option</u>	<u>%</u>
2000	1,614,000	1,539,000	95.4%
2010	2,222,000	2,056,000	92.5%
2020	2,891,000	2,579,000	89.2%









Rationale for the 8-Hour Ozone Boundary Option

- **Most of the growth in population, employment, and vehicle travel in the MSA occurs - and will continue to occur - inside the boundary option**
- **In 2020, the boundary option will include:**
 - 80.1 % of the population
 - 76.0 % of the area with population density >1,000 persons/square mile
 - 89.2 % of the employment
 - 94.3 % of the area with employment density >1,000 employees/square mile





Rationale for the 8-Hour Ozone Boundary Option

- **Measures are in place to control emissions outside of the boundary**
 - Area A measures mandated by the Arizona Legislature are in effect
 - New EPA adopted Tier 2 light duty vehicle and heavy duty vehicle controls and low sulfur fuels and EPA proposed nonroad engine and fuel standards will significantly reduce mobile source emissions in the entire MSA in the near future





Rationale for the 8-Hour Ozone Boundary Option

- **Emission controls imposed within the boundary option and Area A will improve air quality in downwind areas of the MSA**
 - Current control measures have already been successful in eliminating violations of the 1-hour ozone standard
- **Expansion of the boundary further would have minimal marginal effect in reducing emissions in the MSA**





Timeline

- May 8 and 27, 2003 - MAG Air Quality Technical Advisory Committee reviewed information
- June 16, 2003 - Regional Council Executive Committee
- June 17, 2003 - ADEQ recommendation
- June 19, 2003 - MAG Air Quality Technical Advisory Committee recommendation
- June 25, 2003 - Regional Council Action
- July 15, 2003 - Governor's recommendation to EPA
- April 15, 2004 - EPA finalizes the boundaries





For more information

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